



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/587,335

07/26/2006

Yusuke Chikamori

2006\_1199A

6594

513

7590

12/05/2008

WENDEROTH, LIND & PONACK, L.L.P.

2033 K STREET N. W.

SUITE 800

WASHINGTON, DC 20006-1021

EXAMINER

LE, HOA T

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

12/05/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/587,335 | <b>Applicant(s)</b><br>CHIKAMORI ET AL. |  |
|                              | <b>Examiner</b><br>H. (Holly) T. Le  | <b>Art Unit</b><br>1794                 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8-28 is/are pending in the application.
- 4a) Of the above claim(s) 13-20 and 24-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-12 and 21-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 July 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/06 &amp; 04/07</u> .                                       | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of claims 8-12 and 21-23 in the reply filed on August 19, 2008 is acknowledged.

### ***Drawings***

2. The Drawing filed July 26, 2006 is objected to as follows. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1794

4. Claims 8-12 and 21-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukunaga et al represented in US 6,743,395 ("US'395"); EP 1 199 123 ("EP'123") or WO 01/70435 ("WO'435").\*

Examiner's Note: Because the content of EP'123 and WO'435 are essentially the same, only EP'123 is used for citations in the rejection.

Claim 8: See US'395, col. 4, lines 60-65 and claim 1; or EP'123 paragraph [0011] and [0018].

Claim 9: See US'395 claim 4 or EP'123 paragraph [0018]: Alcoholic hydroxyl group and carboxyl group contain only carbon, hydrogen and oxygen. See specifically, US'395 and EP'123, Examples 3 to 7 where higher alcohols are used as the organic compound.

Claim 10: See US'395, claim 2 or EP'123, paragraph [0017].

Claim 11: See US'395, col. 9, lines 32-34 or EP'123, page 7, lines 19-23.

Claim 12: See US'395; col. 4, lines 60-65 or EP'123, paragraph [0011].

Claims 21 and 22: The organic substance used in US'395 and EP'123 is a higher alcohol (Examples 3-7) which is the same type of organic substance preferred in the claimed invention (see instant specification at page 12, lines 21-22). Therefore, it is expected to have thermal separation initiation temperature and separation energy within the claimed range.

5. Claims 8-12 and 21-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Rajagopalan et al (US 6,860,924).

---

\* Provided by Applicant.

Art Unit: 1794

Claim 8: See claim 1.

Claim 9: See claim 1 where ethoxylated alcohols, butadiene, styrene and polycarbonates are disclosed as the coating and also claim 5.

Claim 10: See claim 3.

Claim 11: See col. 3, lines 4-10.

Claim 12: See claim 1.

Claims 21-22: Ethoxylated alcohols and polyethylene wax burn around 150C; therefore, it would be the initiation temperature when it would separate from the metal core and thus the energy generated for separation would be less than 0.3 eV.

Claim 23: The coating involves only mixing in a solvent or drying mixing (see col. 2, line 62 to col. 3, line 3); therefore, the surfactant is bonded to the metallic core by physisorption (e.g. Van der waals force).

6. Claims 8 and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Adams et al (US 6,649,138).

Claim 8: See Adams, claim 1.

Claim 10: See Adams, col. 13, lines 1-10.

Claim 11: See Example 2.

Claim 12: See Adams, col. 10, lines 59-60.

7. Other references are cited as art of interest.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. (Holly) T. Le whose telephone number is 571-272-

Art Unit: 1794

1511. The examiner can normally be reached on 12:30 a.m. to 9:00 p.m. (EST),  
Mondays to Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. (Holly) T. Le/  
Primary Examiner, Art Unit 1794

December 3, 2008